MHz. Even anti-cellular advocates acknowledge that it would be difficult to build an effective 10 MHz Broadband PCS system; in fact, they claim (except when talking about cellular entities) that even 20 MHz is not enough. For example, last January, APC said in a pleading: "20 MHz is woefully insufficient for a workable PCS allocation (and . . . it is nonsense, at any rate, to claim that 10 MHz is sufficient for PCS)."[41] In April, PCS Action claimed that even "20 MHz licenses will cripple the deployment of PCS."[42]

BellSouth agrees with APC that a 10 MHz block is likely to be far less than is needed to construct a PCS system -- even one providing what APC derides as "cellular add-on services."[43] The Commission must consider the fact that a cellular carrier supplementing its cellular service with new services provided over 2 GHz spectrum faces substantial obstacles in attempting to aggregate blocks of 800 MHz cellular spectrum and 2 GHz spectrum together as if it constituted a single block of spectrum. Specialized dual-band equipment must be developed, which will is unlikely to be available until several years after single-band 2 GHz equipment, and any such equipment will be more costly and less convenient for users than single-band equipment.[44]

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[41] APC Reply at 5 (Jan. 13, 1994).

[42] Comments of PCS Action, Inc. at 10 (April 22, 1994).

[43] APC claimed that a 10 MHz allocation from the 2200 MHz band might be "sufficient for niche services or cellular add-on services," but it acknowledged that a "10 MHz allocation in the 1850-1970 MHz band . . . could be entirely stymied by the presence of a *single* incumbent microwave user." APC Reply at 5 n.6.

[44] Using 2 GHz spectrum and 900 MHz spectrum together as part of a single system would require development of dual-band subscriber radios. There are significant timing, cost, and usability challenges to developing such equipment. These challenges will be particularly difficult to surmount due to the absence of a uniform digital standard for either cellular (at least two standards) or Broadband PCS (four or more standards). The lack of uniformity presents significant market risks to a manufacturer, because of the consequences of relying on standards that are not widely adopted by others. This risk would be reflected in the cost of equipment. This risk will also lead to delays in availability, particularly in the
(continued...)

Broadband PCS licensees, on the other hand, can aggregate together a 30 MHz block and a 10 MHz block more or less interchangeably; they can be used with the same technology. The Broadband PCS aggregator adding a 10 MHz block to a 30 MHz block does not have to build a stand alone system in the 10 MHz block. A cellular licensee hoping to offer PCS over 2 GHz spectrum to supplement its vehicular, large-cell cellular service will likely have to build a stand-alone radio system at 2 GHz. As APC said, "it is nonsense to claim that 10 MHz is sufficient for PCS." The 10 MHz limit for cellular carriers is simply not enough to do the job.

Adding 5 MHz to a 10 MHz block may help somewhat, but not enough. Some PCS advocates claim even 20 MHz will be "woefully insufficient." While 20 MHz may not be enough to build a system designed as a full-scale cellular substitute, BellSouth believes that 20 MHz systems will have the potential to make a variety of alternative services available. BellSouth urges the Commission, at a minimum, to raise the cap on cellular eligibility for Broadband PCS spectrum not merely from 10 to 15 MHz, but to 20 MHz. This would at least give cellular carriers the ability to try developing a viable PCS service.

Given the adoption of a CMRS spectrum cap that governs the combination of cellular, Broadband PCS, and Enhanced SMR spectrum,[45] there is no need for a separate 40 MHz cap on PCS spectrum or a 35 MHz cap on combined PCS and cellular spectrum. BellSouth urges the Commission to eliminate the PCS-specific caps, in light of the adoption of a generic CMRS spectrum cap.

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[44](...continued)
case of dual-band equipment, where two standards must be followed. Moreover, a dual-band radio must essentially combine two radios in a single handset, which leads to less convenient, less ergonomic equipment.

[45] *See CMRS Order*, FCC 94-212.

III. AT A MINIMUM, THE COMMISSION SHOULD MITIGATE THE NEGATIVE EFFECTS OF CELLULAR ELIGIBILITY LIMITS

As the preceding sections make clear, BellSouth believes the record warrants substantially eliminating the limits on cellular participation in Broadband PCS. BellSouth recognizes, however, that the Commission may choose to retain some limits, for reasons with which it disagrees. In the following sections, BellSouth suggests ways that the rules could be improved to mitigate adverse consequences.

A. Sunset the Cellular Eligibility Limits and Spectrum Cap after the Auction, Allowing Cellular Carriers and Affiliates to Acquire Broadband PCS Spectrum in the Aftermarket

First, the Commission should consider placing a very brief "sunset" on its rules limiting cellular participation in Broadband PCS, maintaining the rules only long enough to proceed with initial licensing. This would ensure that companies without attributable cellular interests acquire nearly all of the Broadband PCS licenses, ensuring that there are from the outset a maximum number of non-cellular licensees, thus fulfilling the purpose of the cellular eligibility limits. The blanket eligibility limits would be lifted, under this scenario, shortly after initial licensing of all the Broadband PCS licensees in the market -- immediately after auction, or, at worst, after no more than two years.

B. Allow Cellular Carriers to Acquire PCS Facilities at Auction and in the Aftermarket, Conditioned on Divestiture of Cellular Facilities, Without a 20% Limit, to Comply With Eligibility Limits or Spectrum Caps

BellSouth urges the Commission to modify its post-auction divestiture policy. As presently structured, divestiture will only be available in very limited circumstances and will be of little benefit.

In the *Broadband Order*, the Commission agreed with requests by cellular carriers that "it would be reasonable to permit incumbent cellular operators, in certain defined

circumstances, to divest their cellular interests in order to become PCS licensees. These operators could become eligible for 40 MHz of PCS spectrum by either reducing population overlap or ownership levels to below the [attribution] standards."[46] What the Commission did, however, accomplishes none of this. The Commission said it would allow a cellular operator to bid successfully for Broadband PCS spectrum exceeding the 10 MHz cap and then divest, but only if the cellular operator serves less than 20 percent of the PCS service area's population.[47] Moreover, the divestiture would have to occur within 90 days of the grant of the PCS license.

For the reasons that follow, BellSouth fully supports CTIA's proposal that the Commission reconsider its limitation of post-auction divestiture to cellular carriers covering less than 20% of the PCS service area population.[48]

The only reason given by the Commission for imposing some limit was that it agreed with some commenters[49] claiming that there might be abuses of the bidding process -- "cellular operators with significant areas of overlap could have incentives to use the bidding process to forestall licensing of new competitors in the market, because the cellular operator would be in control of both a cellular system and one of the three or four possible 30 MHz broadband PCS licenses."[50] The 20% overlap limit was imposed because the Commission

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[46] *Broadband Order* at ¶ 142, *citing* (at nn.222-223) requests by McCaw, Ameritech, Bell Atlantic, Cablevision, Comcast, CTIA, GTE, Sprint, TDS, and U S WEST.

[47] *Broadband Order* at ¶ 144; *see* 47 C.F.R. § 24.402(f).

[48] CTIA Petition for Reconsideration at 7-8.

[49] The Commission cites five filings by cellular opponents as the source of these concerns: APC Reply at 10-11; PCS Action Comments at 15-16; Time Warner Reply at 6-8; Letter from APC to the FCC at 2 (May 31, 1994); Letter from PCS Action to the FCC at 2 (May 27, 1994). *Broadband Order* at nn.224-25.

[50] *Broadband Order* at ¶ 143.

reasoned that cellular operators under this limit "would have little incentive to risk incurring penalties for abusing the bidding process when PCS offers greater potential to serve the entire MTA or BTA. . . . Operators with population overlaps in excess of 20 percent have increasingly greater incentives not to start competitive PCS businesses."[51] BellSouth submits that this rationale cannot withstand review.

First, *the filings cited by the Commission as the basis for its concerns in fact provide no support. The pleadings do not contain any allegations, or even expressions of concern, that cellular carriers are likely to abuse the bidding process if divestiture is permitted, and only one of the filings even mentioned post-auction divestiture in passing.*[52]

Second, the hypothetical possibility of auction abuse does not support the imposition of a 20% overlap limit. As discussed above, the Commission has made clear that it does not adopt rules to prevent abuses that may or may not occur, on the unfounded assumption that cellular carriers will act anticompetitively.[53] In fact, the abuses about which the Commis-

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[51] *Id.*

[52] The citation of "APC Reply at 10-11" refers to the signature page and service list of a ten-page pleading that makes no mention of divestiture and does not even address cellular eligibility. The citation of "PCS Action Comments at 15-16" refers only to a general discussion of maintaining cellular eligibility limits; nowhere in the pleading is there a discussion of divestiture. The citation of "Time Warner Reply at 6-8" refers to a discussion of limiting the PCS eligibility of Enhanced SMRs; the pleading does not address divestiture. The "Letter[s] from APC to the FCC at 2 (May 31, 1994)" (one to Chairman Hundt and Commissioner Chong, and one to Commissioners Quello, Barrett, and Ness) ask the Commission to reject "post-auction divestiture" as part of "the package of rather cynical proposals being urge by some in the cellular industry". They do not, however, cite any likelihood of auction abuses in support of their contention; in fact, they provide no rationale for why divestiture "must be rejected." Finally, the citation of "Letter from PCS Action to the FCC at 2 (May 27, 1994) refers to a discussion of arguments against cellular eligibility, but the filing contains no reference to divestiture or auction abuses.

[53] *See Broadband Order* at ¶ 103, *quoted supra* at page 17.

sion is concerned are extremely unlikely to occur.[54] *There is little or no likelihood that a cellular carrier -- even with 100% overlap -- will make the winning bid for a Broadband PCS license and pay the full price for the license, merely to forestall the entry of an additional competitor.* A cellular licensee may buy a PCS license to move to the next generation of technology, or it may buy a PCS license to provide a different range of services, but it would not make economic sense to pay the full cost of a PCS license simply to withhold the spectrum from use by another party. The cellular carrier's investment in a license at a market-based price, together with its obligation to divest its cellular operations after it obtains a 30 MHz PCS license, give it a very powerful incentive to develop the PCS spectrum and begin operations promptly, thereby generating revenues.

Similarly, the risk of becoming the winning bidder negates any incentive for a cellular carrier to abuse the bidding process by bidding just to force the new entrants to raise their bids.[55] A cellular carrier (or any other rational bidder) will not bid anywhere near the value of the license unless it hopes to win the license. To do otherwise would risk losing its substantial upfront payment and being liable for a penalty. If and when it wins the license, it has every incentive to put the spectrum to use without delay, because it will have to divest its cellular holdings.[56]

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[54] *See* Rozek Affidavit, Exhibit I at 9, 10-13. Dr. Rozek notes that concerns about anticompetitive behavior in the electric industry, when utilities bid in competition with others to supply power, have proven unfounded. *See id.* at 14-15.

[55] As long as a cellular carrier's bids remain below the market value of the license, its bids will have little effect on the price, because other bidders would continue to outbid each other (assuming there are multiple bidders, as seems likely). As its bids approach the market value of the license, the carrier risks being the winning bidder. If it bids above the market value of the license, the carrier is virtually certain to become the winning bidder.

[56] If the cellular carrier defaults after submitting the winning bid, there will be very substantial penalties imposed. Given these penalties, it is very unlikely that a cellular carrier would outbid new entrants for a license and then default, simply to raise the price of the
(continued...)

C. Grant Cellular Providers Immediate Access to Additional Spectrum

At a minimum, BellSouth fully supports CTIA's suggestion that the Commission should allow cellular carriers to acquire an increased amount of spectrum now, instead of the current plan, which makes available 10 MHz now and 5 MHz more in the year 2000.[57] There is no reason for subjecting cellular carriers to a 10 MHz cap on Broadband PCS spectrum, to be increased later to 15 MHz, while others are able to acquire 40 MHz now. This discriminatory treatment will not foster competitive parity,[58] further competition, or serve the public interest.

The public will be the loser under this scenario, because customers will be deprived of the higher level of competition among Broadband PCS licensees that would ensue if cellular carriers were able to bid for (or aggregate) 20 MHz of spectrum, rather hold a single 10 MHz block.[59] BellSouth agrees with CTIA that

> the secondary market is infinitely more likely to produce an efficient allocation of the marginal 5 MHz of spectrum than is the Commission. Allowing cellular providers to purchase the marginal 5 MHz in the secondary market is as likely to enhance competition as it is to impede it and gives a weaker PCS provider a greater range of exit strategies. Moreover, allowing unfettered alienation of the marginal 5 MHz would increase its initial value at auction.[60]

This rationale is equally applicable to a marginal 10 MHz block of spectrum.

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[56](...continued)
license or achieve a minimal delay in licensing a competitor. Moreover, the Commission retains the right to disqualify the carrier from further auctions or impose other sanctions in the unlikely event a cellular carrier engages in such conduct.

[57] CTIA Petition at 6-7.

[58] *See Broadband Order* at ¶ 67.

[59] Giving cellular carriers access to 20 MHz would eliminate the need to disaggregate spectrum blocks in the year 2000 to obtain an additional 5 MHz.

[60] CTIA Petition at 6-7.

D. Refine the Attribution and Overlap Rules

BellSouth supports the petitions of CTIA and Comcast seeking to improve and simplify the attribution and overlap rules. The Commission's complex attribution rules treat minor interests the same as controlling interests. This scheme leads to all kinds of anomalous results and desperately needs to be revised.

1. Adopt Comcast's Proposal to Increase the 5% PCS Ownership Attribution Threshold to 20%-25%

Comcast proposes that the Commission increase its 5% attribution threshold for PCS equity interests to 20%, or 25% in the case of publicly traded corporations, provided that no more than 5% are voting interests (15% in the case of publicly traded corporations).[61] This proposal has great merit and should be adopted.

The Commission acknowledges, in its attribution rules for cellular interests and designated entities, that an equity interest substantially exceeding 5%, standing alone, does not confer control and presents little potential for anticompetitive behavior.[62] One who holds less than a 5% voting interest in a PCS licensee should (at a minimum) be permitted to hold additional passive, non-voting interests that bring its total equity interest to a level below 20% without being attributed with the PCS spectrum. This would make it easier for PCS companies to raise capital from venture capitalists, institutional investors (such as mutual funds and pension plans), and others. Many investors seek to invest their funds in a broad segment of an industry, rather than in a single company. This approach would allow investors to share in the growth of the PCS industry without the risks of depending on a single company's performance.

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[61] Comcast Petition at 1-7.

[62] *See Broadband Order* at ¶ 105.

A 5% equity attribution threshold will make it difficult for prospective PCS licensees to attract significant investors. Non-controlling investors holding interests in several companies involved in PCS may find (after the fact) that several of the companies applied in the same market. To avoid the risk of dismissal, PCS companies have to ensure that none of their 5% or greater investors holds a comparable interest in other potential PCS applicants, which may be impossible unless most non-controlling investors are limited to a position not exceeding 5%. Comcast's proposal will make it much easier for PCS companies to put together a slate of investors, because they will be able to offer investors the opportunity to hold a 19.9% equity interest (including a 4.9% voting interest), thereby reducing the number of investors needed and substantially reducing the risk that the investors' other holdings will pose a cross-ownership problem.

Comcast's proposal to allow even greater levels of non-attributable ownership in the case of publicly traded companies has merit for many of the same reasons. A publicly traded company has no control over who buys its stock or the investment strategies of those buying its stock. Institutional investors, such as mutual funds and pension plans, frequently have stockholdings exceeding 5% in companies without acquiring any degree of control.

In fact, large investors frequently hold positions of 5% or more in multiple companies that compete with one another. "Sector" funds, in particular, take substantial positions in a variety of companies in a given field, and may hold greater than a 5% interest in several companies in that field. In fact, there are a wide variety of publicly traded companies planning investments in PCS, including cable television companies, publishers, telephone companies, cellular companies, and diversified entertainment companies. There is thus a significant risk that a single investor may acquire positions exceeding 5% in two or more publicly traded companies involved in PCS, without any intent of putting the companies over the FCC's limit. Companies should not be put at risk that their PCS applications will be

dismissed due to cross-ownership violations caused by the investment strategies of investors over whom they have no control.

Comcast's proposal to raise the threshold for voting equity attribution to 15% and for total equity attribution to 25% will very significantly mitigate the risk that publicly traded companies will be placed in violation of the cross-ownership rule due to the actions of independent investors. Holdings of 15% or more of the voting stock of publicly traded companies by non-controlling shareholders are far less common than 5% holdings. A 15% threshold for voting equity attribution will, therefore, significantly diminish the risk associated with public trading of voting stock and will make it easier for companies involved in PCS to raise capital. Raising the attribution threshold for combined voting and non-voting equity to 25% will give publicly traded companies involved in PCS the flexibility they need to develop capital structures for attracting significant, non-controlling investors.

2. Adopt CTIA's Proposal to Increase the 10% Overlap Threshold to 40% and the 20% Cellular Attribution Threshold to 30-35%

CTIA asks the Commission to increase the thresholds for attribution of cellular spectrum to a PCS licensee, principally to avoid disqualifying companies from the 30 MHz MTA blocks due to relatively minor interests in cellular systems that cover only a minority of an MTA's population.[63] CTIA proposes increasing the threshold for cellular ownership attribution from 20% to 30-35% and the population coverage overlap threshold from 10% to 40%.[64] BellSouth supports CTIA's proposal.

BellSouth agrees with CTIA that "bright-line" tests, resulting in either full attribution or non-attribution depending on some arbitrary non-majority percentage, lead to anomalous

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[63] CTIA Petition at 2-4.

[64] *Id.* at 4-6.

results.[65] That is why BellSouth urged the Commission to use a pro-rata attribution standard and again asks the Commission to consider such a standard in Section III.D.3, below. If the Commission nevertheless adheres to the use of "bright-line" attribution and overlap rules, it should minimize the likelihood of anomalous results by raising the thresholds for attribution of cellular spectrum to a Broadband PCS licensee or applicant.

The 10% population overlap rule is unduly restrictive. The Commission adopted an overlap standard because it was concerned about the "*potential* for unfair competition . . . where there is *significant* overlap."[66] Clearly, the mere *potential* for unfair competition should not be the reason for adopting a rule such as this.[67] More importantly, however, the 10% level is not a "significant" degree of overlap. If the Commission intends to attribute cellular spectrum when there is a significant overlap short of 50%, the 40% threshold proposed by CTIA is more reasonable. A cellular carrier that covers less than 40% of the population served by a Broadband PCS licensee has decidedly inferior coverage and will clearly not be in a position to dominate the competition amongst the two, or to engage in other "unfair competition."

The 20% equity ownership threshold for attributing cellular interests should also be raised. The *Broadband Order* rejected CTIA's request to raise this limit to 35% *in reliance on a premise that was factually incorrect.* It relied on PCS Action's assertion that the 35% standard would allow a consortium owned equally by three major cellular carriers to hold

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[65] *Id.* at 5.

[66] *Second Report and Order*, 8 FCC Rcd. at 7744 (emphasis added)

[67] *See Broadband Order* at ¶ 103.

all of the 30 MHz MTA licenses in areas that are completely covered by their wholly-owned cellular systems.[68] The rule proposed by CTIA would do nothing of the sort.

Both PCS Action and the Commission confused the separate rules regarding attribution of *cellular* and *PCS* interests. The proposed 35% cellular attribution threshold would attribute to a PCS licensee or investor all cellular spectrum in which it holds a 35% or greater interest. Thus, each of the three companies in the hypothetical consortium would be deemed a cellular licensee.[69] Their participation in the PCS consortium, on the other hand, would be measured against the PCS attribution standard, which is currently 5%. Each of the three companies is the attributable owner of the PCS applicant, because its 33.3% interest exceeds the 5% threshold, and the PCS spectrum and cellular spectrum would thus be fully attributable, exceeding the cap. Moreover, the consortium itself would be attributed with the cellular spectrum of its owners, because each owner exceeds the 5% attribution threshold. Thus, a 35% cellular attribution threshold would not permit the formation of a PCS consortium equally owned by three cellular carriers who cumulatively cover the MTA, contrary to PCS Action's argument. This would remain true even if the 5% attribution standard for their PCS interests were raised as Comcast's petition asks.

BellSouth believes that the public interest would be served by allowing companies with minority, non-controlling cellular interests to hold PCS licenses or attributable interests therein. Companies with a non-controlling interest in a cellular licensee that does not reach

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[68] *Broadband Order* at ¶ 111 & n.174, *citing* PCS Action Comments at 16-17.

[69] This remains true even under the "multiplier" approach adopted in the *Further Order on Reconsideration*, since the cellular interests are wholly owned.

the 35% level would have neither the incentive nor the ability to suppress or impede competition.[70]

The Commission's fear that "the [PCS] licensee would have economic incentives not to compete vigorously against competitors in which it holds a substantial equity interest" is unfounded. If a limited partner in a cellular system who holds less than a 35% interest in that system (and has no control, being a limited partner) bids for, and wins, a PCS license in its own name, it will have to pay the market price for the PCS license and make a very substantial investment in constructing and operating the PCS system. Its financial stake in the PCS system, which it controls, is likely to be much greater than its investment in a minority share in the cellular system, which it does not control. To maximize its profits, it must generate PCS revenue by offering services for which there is a substantial customer demand, which may or may not include service competing with the cellular carrier. Its minority, non-controlling interest in the cellular carrier functions as a hedge against failure, not an incentive to fail.

3. In the Alternative, Adopt BellSouth's "Multiplier" Proposal for Pro Rata Attribution of Cellular, SMR, and PCS Interests, In Lieu of Specific Thresholds

In the alternative, BellSouth urges the Commission to consider the attribution scheme proffered in its petition for reconsideration of the *Second Report and Order*,[71] which has

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[70] If the Commission nevertheless remains concerned about the incentives of the cellular licensee and PCS licensee to compete when there is minority cross-ownership, it may wish to consider establishing separate attribution thresholds for voting and total equity interests, similar to what Comcast proposes with respect to interests in the PCS licensee. For example, the Commission might set the threshold at 35% for total equity, while setting a lower threshold for attributing voting interests in the cellular licensee, such as 25-30%.

[71] BellSouth Petition for Reconsideration at 14-17.

not been addressed to date. BellSouth's attribution proposal is simple and fair, because it takes into account a wide variety of factors without giving untoward effect to minor interests.

BellSouth submits that the attribution rules should fairly take into account multiple parties holding interests in various cellular and SMR properties covering differing percentages of the PCS service area population, varying ownership interests, and different spectrum allotments. It achieves this result by utilizing pro rata multipliers for coverage and ownership.[72] This fairly takes into account multiple parties holding interests in various cellular and SMR properties covering differing percentages of the PCS service area population, varying ownership interests, and different spectrum allotments. How these factors would be accounted for is shown in Chart 1 in matrix form.

Assume Company X holds interests in cellular and SMR licensees with coverage in the relevant PCS service area, as described in Chart 1. The spectrum attributable to X is 5.302 MHz, calculated as follows:

Chart 1
Frequency Attribution Calculation

(A) LICENSEE	(B) MHZ	(C) POPULATION OVERLAP	(D) PERCENTAGE OWNERSHIP	(E) OWNERSHIP FACTOR	(B)×(C)×(E) ATTRIBUT-ABLE SPECTRUM
RSA 1	25.0	3.2%	40.0%	0.4	0.320
RSA 2	25.0	2.4%	51.0%	1.0	0.600
MSA 1	25.0	26.8%	50.0%	0.5	3.350
SMR 1	1.0	3.2%	100.0%	1.0	0.032
SMR 2	2.0	5.0%	49.0%	0.0	0.000
SMR 3	10.0	10.0%	60.0%	1.0	1.000
Total attributable spectrum:					5.302

[72] The use of a *pro rata* multiplier for attribution would be consistent with the way the Commission considers interests that are held indirectly, *see Further Order on Reconsideration*, FCC 94-195 at ¶¶ 3-5. *See also* 47 C.F.R. §§ 22.921(c)(2)(ii), 73.3555 Note 2.

Column (C): Percentage of licensee population within the PCS service area, as a function of total population.

Column (E): The ownership attribution factors are based on the broadcast attribution rules. The holder of a majority interest is fully attributed with the licensee's spectrum, resulting in an ownership attribution factor of 1.0. RSA 2, SMR 1, and SMR 3 are examples of this. Owners of interests not exceeding 50% are attributed with a *pro rata* share of the licensee's spectrum, if there is no majority owner, resulting in an ownership attribution factor that is equal to percentage ownership. RSA 1 and MSA 1 are examples of this. If there is a majority owner, the minority owners are not attributed with any interest, resulting in an ownership attribution factor of 0. SMR 2 is an example of this.

The total attributable spectrum interest resulting from these calculations would be applied toward each entity's 45 MHz spectrum aggregation limit. Thus, X would be eligible for 45 - 5.302 = 39.698 MHz. If there are multiple owners of an applicant for a PCS license, the attributable interests of each owner, weighted by percentage ownership, would be counted against the applicant or licensee's 45 MHz limit.[73] To permit rational spectrum allocation and reconfiguration, the Commission should permit entities to exceed the 45 MHz limit temporarily, subject to divesting the excess within a specified time after grant.

This approach is consistent with the spirit of the Commission's *Further Order on Reconsideration*, in which the rules were amended to use a multiplier for determining the level of equity ownership in a cellular or PCS license held through minority, non-controlling interests in intermediate corporations. The Commission said:

> [U]sing a multiplier is consistent with our policy goal of promoting full competition in wireless markets, because it will not cause the exclusion of firms that pose no threat to competition. Without a multiplier, parties that have neither the ability to exert control nor a substantial financial stake in the cellular or broadband PCS license could be unduly restricted in acquiring interests in such license.[74]

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[73] For example, X might enter into a partnership with Y and Z with each holding a one-third interest. Assume X has an attributable spectrum interest of 5.302 MHz, as above, Y has an attributable spectrum interest of 5.6 MHz, and Z has an attributable spectrum interest of 9.8 MHz. The partnership would be deemed to have attributable spectrum interests of (5.302 MHz / 3) + (5.6 MHz / 3) + (9.8 MHz / 3) = 6.9 MHz. Accordingly, the partnership could acquire up to 45 MHz - 6.9 MHz = 38.1 MHz of PCS spectrum.

[74] *Further Order on Reconsideration*, FCC 94-195 at ¶ 4.

This reasoning equally supports the pro rata attribution method set forth above.

IV. THE COMMISSION SHOULD NOT ATTRIBUTE CELLULAR SPECTRUM TO LOCAL EXCHANGE CARRIERS WHEN HELD BY A STRUCTURALLY SEPARATED SUBSIDIARY, PURSUANT TO § 22.901

At present, Section 22.901 of the Commission's rules requires cellular service to be structurally separated from the provision of landline local exchange service, in the case of the Bell Companies. BellSouth urges the Commission either to provide that cellular spectrum licensed to the separated subsidiary is not attributable to the telephone company, or to end the cellular structural separation rules.

Under 47 C.F.R. § 22.901, BellSouth Telecommunications, Inc. ("BST"), which is a local exchange carrier, is prohibited from engaging in the provision of cellular service, which is provided by BellSouth Cellular Corporation ("BCC") and its subsidiaries, consistent with the rule. Despite the fact that BST is not permitted to have any degree of control over the use of cellular spectrum, cannot provide PCS-type "auxiliary" services using cellular spectrum, and arguably cannot even resell cellular service, BST would be considered a fully attributable cellular operator due to BCC's structurally separated operations. As a result, BST is foreclosed from applying for more than 10 MHz of Broadband PCS spectrum, even though it has no access to cellular spectrum.

This result is manifestly unreasonable. If BST is to be attributed with ownership of BCC's cellular licenses, the Commission should eliminate the cellular separate subsidiary rule. This would permit BST and other Bell local exchange carriers to engage in more meaningful wireless local exchange service offerings, pursuant to the auxiliary service rules,[75] than is possible through the use of a 10 MHz block of Broadband PCS spectrum. In the alternative, the Commission should exempt cellular interests from attribution when

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[75] *See* 47 C.F.R. § 22.930.

they are separated as required by § 22.901. This would permit companies such as BST to apply for up to 40 MHz of Broadband PCS spectrum and provide a full range of competitive PCS offerings.

V. THE COMMISSION SHOULD ADOPT PCIA'S PROPOSAL FOR COST-SHARING BY PCS LICENSEES BENEFITTING FROM RELOCATION OF FIXED MICROWAVE LICENSEES

PCIA notes in its petition that the current Broadband PCS band plan does not correspond with the way fixed microwave allocations have been established in the same spectral region. Accordingly, microwave links may affect the Broadband PCS operations of multiple licensees in a single market, or even in multiple markets. Relocating the microwave licensees to permit PCS operations will be extremely complex under these circumstances, giving rise to "free rider" problems and distorting parties' incentives to engage in an orderly relocation and transition process.[76]

PCIA's petition presents a plan for sharing the cost of microwave relocation and facilitating the rapid development of Broadband PCS. Specifically, PCIA asks the Commission to mandate the participation in a cost-sharing plan of PCS interests who benefit from the relocation of an incumbent microwave link. Each PCS interest benefitting from the relocation of a microwave link would pay a equitable proportion of the costs involved, *at the time it benefits.*

BellSouth strongly supports this approach and urges the Commission to consider its adoption.

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[76] PCIA Petition at 2-5.

CONCLUSION

For the reasons stated, BellSouth urges the Commission to reconsider its cellular eligibility limits for Broadband PCS. If it does not engage in a fundamental reevaluation of these rules, it should consider a number of ways to mitigate their negative effects, such as establishing a short-term sunset date for the restrictions. At a minimum, the Commission must revise and rationalize its cellular attribution and overlap standards.

BellSouth also asks that the Commission accelerate cellular carriers' access to more than the initial 10 MHz of spectrum the rules currently allow; making a total of 20 MHz available would facilitate the provision of alternative services, and even prompt access to 15 MHz would give cellular carriers more flexibility to serve the needs of their customers than is the case with only a single 10 MHz block.

The Commission should also liberalize substantially its post-auction divestiture limits, thereby allowing cellular carriers to make the transition to new technologies and services in lieu of cellular, should they desire to do so. The Commission should eliminate the unreasonable effect of the cellular separate subsidiary rule, which results in attribution of cellular spectrum to telephone companies despite their lack of access to that spectrum.

Finally, BellSouth urges the Commission to adopt the PCIA microwave relocation cost-sharing plan.

Respectfully submitted,

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August 30, 1994

EXHIBIT I

Affidavit of Richard P. Rozek
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Research Associates, Inc.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington D.C. 20554

In the matter of	)	
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Amendment of the Commission's Rules to Establish New Personal Communications Services	)	GEN Docket No. 90-314
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DISTRICT OF COLUMBIA) **ss:**

AFFIDAVIT OF RICHARD P. ROZEK

I. BACKGROUND AND QUALIFICATIONS

(1) My name is Richard P. Rozek. I am an economist and a Vice President of National Economic Research Associates, Inc. (NERA), a firm specializing in the economics of competition and regulation. My business address is 1800 M Street, N.W., Washington, D.C. 20036.

(2) I will briefly summarize my background as it pertains to this submission. I earned a B.A. degree *cum laude* in mathematics from the College of St. Thomas in 1969. I earned a M.A. degree in mathematics from the University of Minnesota in 1971; and I earned M.A. and Ph.D. degrees in economics from the University of Iowa in 1974 and 1976, respectively. My doctoral dissertation was a theoretical analysis of the bidding process in a centralized market such as a commodity futures market.

(3) At the time I was awarded a Ph.D. degree, I was an assistant professor in the Department of Economics at the University of Pittsburgh. I continued in that position until January 1979. I then joined the Bureau of Economics at the U.S. Federal Trade Commission (FTC) in Washington, D.C. as a staff economist. I worked at the FTC in the antitrust and regulatory analysis divisions for six and one-half years, holding several senior staff positions including Deputy Assistant Director for Antitrust. While at the FTC, I worked on analyses of mergers in high-technology industries and, more generally, on projects involving antitrust

and regulatory issues in a wide variety of industries. In July 1985, I became the economist at the Pharmaceutical Manufacturers Association. Finally, I joined NERA in July 1987 as a Senior Consultant, and I was elected Vice President in September 1991.

(4) Since joining NERA, I have worked on designing bidding processes for power generation markets, using bidding systems in labor markets for professional athletes and applying bidding models in antitrust analyses. I have published approximately 30 articles in professional journals on topics such as competition policy, incentives for innovation, bidding processes and behavior of firms subject to regulatory constraints. I have testified at trials and in depositions on competition issues. I have submitted a report to a state regulatory agency on the competitive effects of specific bidding practices used by a telephone company to acquire inputs. I have submitted two affidavits to the U.S. District Court in connection with requests for waivers of the Modification of Final Judgment (MFJ).[1] I have also submitted three affidavits on the competitive impact of the merger of the American Telephone and Telegraph Company (AT&T) and McCaw Cellular Communications, Inc. (McCaw) as part of the review of the application before the Federal Communications Commission (FCC) to transfer certain licenses from McCaw to AT&T.[2] I attach a copy of my current vita (Attachment A).

II. PURPOSE AND SUMMARY

(5) The purpose of my affidavit is to analyze the benefits and costs of FCC rules restricting cellular providers from participating in auctions for awarding licenses to provide personal communications services (PCS) in the 2 GHz band (broadband PCS). Current FCC rules limit the total amount of spectrum to 10 MHz that incumbent cellular providers are able to acquire for broadband PCS in areas where they operate cellular systems (cellular eligibility

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[1] Affidavit of Charles L. Jackson and Richard P. Rozek in the matter of *U.S. v. Western Electric Co. and American Telephone and Telegraph Company*, U.S. District Court for the District of Columbia, Civil Action No. 82-0192-HHG, supporting the "Request by BellSouth Corporation for a Waiver of the Modification of Final Judgment to Allow BellSouth Corporation to Provide Integrated MultiLATA Cellular Service," filed May 9, 1991; and Affidavit of Richard P. Rozek and Harold Ware in the matter of *U.S. v. Western Electric Co. and American Telephone and Telegraph Company*, U.S. District Court for the District of Columbia, Civil Action No. 82-0192-HHG, supporting "BellSouth Corporation's Opposition to AT&T's Motion for a Waiver of Section I(D) of the Decree Insofar as it Bars the Proposed AT&T - McCaw Merger," filed June 28, 1994.

[2] *See* "Petition to Impose Conditional Grant to Create a Competitive Market, or Deny as Filed," "BellSouth Reply" and "Further Comments Supplementing BellSouth's Petition," before the Federal Communications Commission in the matter of *AT&T-McCaw Merger, In re applications of American Telephone and Telegraph Company and Craig O. McCaw For Consent to the Transfer of Control of McCaw Cellular Communications, Inc. and its Subsidiaries*, File No. ENF-93-44, filed November 1, 1993, January 18, 1994, and June 20, 1994, respectively.

and spectrum cap rules).[3] These rules restrict cellular providers to a greater extent than the rule, which applies to all entities, limiting an entity to a maximum of 40 MHz of PCS spectrum.[4]

(6) Based on the economic literature regarding auctions and competition, other safeguards the FCC has incorporated in its rules governing PCS licenses, and actual experience with auctions, my conclusion is that the cellular eligibility and spectrum cap rules inhibit the very competition the FCC and the Congress seek to encourage in PCS. By allowing cellular firms to participate fully in the auctions, the expected revenue generated from the auctions will likely increase due to the increase in competition from serious, viable firms; and the licenses will likely be awarded to the bidder who values them most highly. Restricting existing cellular providers will inhibit their ability to remain on the technological frontier in the rapidly changing telecommunications industry. Specifically,

- As the FCC acknowledges, cellular providers have many economic advantages that suggest they would be vigorous competitors in both the auctions for PCS licenses and subsequently in wireless markets.
- The FCC's three competitive concerns about increasing market concentration, cellular providers warehousing spectrum and expanding economic opportunities are not well-founded.
- Denying cellular providers the opportunity to compete fully may be detrimental to long-term competition in wireless markets.
- There are other safeguards in effect to prohibit the type of anticompetitive behavior, albeit unlikely to occur, that concerns the FCC.
- Experience with auctions for narrowband PCS and in the electric utility industry support removing the cellular eligibility and spectrum cap rules.

III. AUCTION THEORY

(7) The FCC has already conducted analyses of the use of auctions to award PCS licenses. It has developed a process that it intends to use for the broadband auctions later this

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[3] FCC rules allow "entities with a 20 or more percent investment interest in a cellular license to acquire a 10 MHz PCS license in the same area";. . .[and] as of January 1, 2000, we [FCC] will afford cellular operators the same overall 40 MHz spectrum cap as other PCS operators, and allow them to acquire an additional 5 MHz for a total of 15 MHz of PCS spectrum in the same service areas as their cellular interests." "Memorandum Opinion and Order," Before the Federal Communications Commission in the matter of Amendment of the Commission's Rules to Establish New Personal Communications Services, GEN Docket No. 90-314, RM-7140, RM-7175, RM-7618, Released June 13, 1994, p. 6. (Memorandum Opinion and Order).

[4] *Ibid.*, p. 41.

year.[5] There is a vast economic literature on auctions of which the FCC is aware.[6] An important lesson from the auction literature is that "the rules of the game" matter.[7] As the FCC recognized, the rules governing factors such as the timing and quantity of information available to buyers and sellers determine the auction outcome.[8] Therefore, the FCC should consider the impact of all its rules on the likely outcome of the PCS auctions.

(8) The precise rules at issue here concern cellular providers not being able to bid for PCS licenses representing more than 10 MHz of spectrum in their own service area. Such rules will adversely affect the outcome of the auction. They limit the number of serious potential bidders and thus limit the expected revenue from the auction,[9] and exclude bidders who likely value the PCS spectrum highly.[10]

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[5] "Second Memorandum Opinion and Order," Before the Federal Communications Commission in the matter of Implementation of Section 309(i) of the Communications Act-Competitive Bidding, PP Docket No. 93-253, released August 15, 1994 (Second Memorandum Opinion and Order).

[6] See R. McAfee and J. McMillan, "Auctions and Bidding," *Journal of Economic Literature*, Vol. 25, No. 2, June 1987, pp. 699-738; and J. McMillan, "Selling Spectrum Rights," *Journal of Economic Perspectives*, Vol. 8, No. 3, Summer 1994, pp. 145-162.

[7] "Prompt licensing of PCS meets the business needs of the potential competitors. They must know the 'ground rules' so that they may finalize their business plans, complete market studies and technical trials, forge alliances, attract financing, establish standards and manufacture equipment." "Statement of Commissioner James H. Quello," Re: Amendment of the Commissioner's Rules to Establish New Personal Communications Services, GEN Docket No. 90-314, released June 13, 1994, p. 2.

[8] *See*, for example, Second Memorandum Opinion and Order, *op. cit.*, pp. 17-19.

[9] Suppose cellular providers are able to bid without special restrictions for PCS licenses. Their mere presence in this pool of potential bidders will likely increase competition and thus raise bids. "[E]xecutives involved in the deals and analysts agreed MCI's Nextel investment and others' attraction to ESMR [enhanced specialized mobile radio] systems would eliminate substantial bidding money from the pot for PCS auctions. . .resulting in a 40 percent reduction in auction prices and eliminating roughly $2 billion in bid money." "MCI Endorses Nextel for Being Faster to National Digital Wireless Than PCS," *PCS News*, Vol. 5, No. 6, March 17, 1994. More recently, MCI called off its plan to buy 17 percent of Nextel. J. Keller, "MCI Calls Off Plan to Buy 17% of Nextel," *The Wall Street Journal*, August 30, 1994, p. A-3.

[10] A firm could value a license highly if it enhances its market power. This is not the case with PCS licenses. As will be discussed below, cellular providers likely value PCS licenses highly due to the advantages they possess in developing and deploying wireless technologies, especially in their established service areas.

IV. FCC AUCTION RULES

A. Goals and Objectives

(9) The FCC has four goals associated with allocating PCS spectrum: "competitive delivery, a diverse array of services, rapid deployment, and wide-area coverage."[11] In addition, there are three Congressional objectives associated with PCS: promote economic growth and competition, provide widespread access to telecommunications service offerings and ensure PCS licenses are disseminated to a wide variety of applicants.[12] The FCC has established rules for allocating the PCS spectrum intended to achieve its goals and Congressional objectives. For example, to encourage a wide variety of applicants for licenses (Congressional objective), the FCC's response is to limit the ability of cellular providers to bid for PCS licenses. However, a tension exists since this response could slow the rate at which PCS technology is diffused or deployed given cellular providers' extensive experience in wireless technologies. Cellular providers are especially knowledgeable about the characteristics of buyers as well as technical issues[13] in their own areas. They also have the infrastructure in place to expand efficiently into offering additional wireless services in areas where they currently operate. The cellular eligibility and spectrum cap rules actually work to undermine certain goals or objectives set by the FCC or Congress.

B. Unrestricted Cellular Providers Will Be Vigorous Competitors in PCS Auctions

(10) The FCC acknowledges that "[a] competitive market is the best way to introduce broadband PCS to help meet these demands [for rapid communications]."[14] It is well-known in the antitrust area that preserving competition should not be interpreted to mean protecting competitors. Merely maximizing the number of competitors of one type, while excluding others, will not necessarily yield benefits to the government and to consumers if the excluded competitors are financially, technologically and managerially the most capable providers of a good or service. As the FCC has already stated, "it is important to require licensees to have the financial ability to construct and operate a system in addition to being

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[11] Memorandum Opinion and Order, *op. cit.*, p. 3.

[12] *Ibid.*, pp. 3-4.

[13] For example, current cellular providers have extensive experience regarding radio spectrum propagation problems and solutions in their own territories. Such knowledge would be useful to expedite deploying PCS.

[14] Memorandum Opinion and Order, *op. cit.*, p. 3.